RCRA FACILITY FACT SHEET

BP's Former Amoco Refinery
Casper, Wyoming 82602

FACILITY BACKGROUND

The Midwest Oil Company and the Franco Petroleum Company began processing petroleum in Casper, Wyoming in 1912 on separate parcels of what is now identified as the former Amoco Refinery Property. In 1913, Amoco began operating adjacent to the Midwest and Franco properties. Eventually, Midwest Oil Company took control of Franco and by 1928, Midwest was purchased by and integrated into Amoco. The former Amoco Refinery operated until 1991 and in 1998 Amoco Corporation merged with British Petroleum to become BP Corporation North America Inc., hereinafter referred to as BP.

The early process units at the refinery consisted of mainly batch and coke stills that separated crude oil into useable products. Other batch processes produced and treated lube oils and finished waxes, and removed sulfur odor from gasoline. These units and processes along with boiler houses, pump houses, and the railroad car loading facility, constituted the bulk of the early operations. In the late 1940's, a fluid catalytic cracking unit was built, followed in the mid-1950s by the ultraformer and alkylation units. The pipestill, central boiler house and lube refining units were constructed in the early 1960s and were continuously upgraded as new technologies developed. At the height of production (circa 1987) the former refinery processed an average of approximately 48,000 barrels of oil per day. In its last year in operation, output from the former refinery included: fuel gas (1450 barrels per day (BPD)); liquid propane gas (300 BPD); motor/aviation gasoline (14,700 BPD); fluid cracking unit coke (780 BPD); heavy fuel oil (400 BPD); kerosene and distillates (11,300 BPD); asphalt (500 BPD) and residuum (1800 BPD).

ENVIRONMENTAL CONCERNS

Hydrocarbon and metals contamination from refinery operations has been identified in the soils and groundwater in and around the former refinery. Twelve units have been identified where past wastes were managed, and there are an additional fifteen areas identified where environmental impacts may be present. The closest natural water body is the North Platte River, which bisects the north and south properties. The former refinery also discharged process water to the Soda Lake inlet basin from 1957 through 1990. Soda Lake is located 2 to 3 miles northeast of the Refinery Property.

CORRECTIVE ACTION

BP's regulatory history at the former Amoco Refinery in Casper, Wyoming began in 1980 when BP submitted a RCRA Part A permit application designating the property as an interim status facility under federal hazardous waste facility laws with the EPA. In 1998, the WDEQ assumed the responsibility for requiring BP to move forward with corrective action at the site. A collaborative process was used to make investigation, risk assessment and cleanup decisions for the site. This collaborative process allowed the local authorities, the WDEQ and BP to have open

technical discussions and required the WDEQ to make corrective action decisions in consideration of public comments. This also provided a forum for each party to understand and address each other's concerns and specific needs during each step of the corrective action process, rather than WDEQ and BP reaching decisions and presenting them for public review and comment after the fact.

In January 2002, the WDEQ and BP signed a Remedy Agreement after reaching cleanup agreements with community buy in and support. The Remedy Agreement includes remedy decisions developed for three separate areas; *Remedy Decision #1 – South Properties Area* (which includes the Refinery Property*); Remedy Decision #2 – North Properties Area and the North Platte River;* and *Remedy Decision #3 – Soda Lake Area.*

The remedy decisions outline the cleanup requirements for each of the properties in detail; highlights include:

- Installation of a six thousand foot long steel sheet pile (subsurface) *barrier wall and hydraulic well system* to contain and remove subsurface contaminants that had the potential to migrate and impact the North Platte River;
- *Source Removal* including removal of the subsurface pipe, waste units, soils that have the potential to impact groundwater, and removal of free phase hydrocarbons from groundwater;
- *Removal of contaminated soils* that exceed risk-based standards protective of site users and animals;
- Construction of a *Corrective Action Management Unit* (CAMU) as a permanent engineered containment system for remediation wastes;
- An elaborate *groundwater restoration system* including a water treatment system that uses wetlands to remove contaminants; and
- A *demonstration project* designed to increase the likelihood that a technology suitable for remediation of localized persistent source areas will be available in the event the remedies selected do not perform according the performance criteria.

Since signing the Remedy Agreement, the WDEQ and BP have continued to collaborate on design, operation, monitoring and maintenance work plans and completion reports required by the remedy decisions using a work group concept developed while doing the formal collaborative process. The oversight work group has met regularly to discuss and resolve technical issues.

VOLUNTARY REMEDIATION PROGRAM and REUSE

In 2000, BP was the first facility accepted into WDEQ's *Voluntary Remediation Program (VRP).* Participating in the VRP allows volunteers to receive liability assurances such as a 'covenant not to sue' from the WDEQ, and also allows the WDEQ to consider future land use when making cleanup decisions with the proviso that the local government is willing to institutionalize the property as a Use Control Area (UCA). A UCA is an institutional control developed under WDEQ's VRP law that restricts the future use of a property. The City of Casper and Natrona County were willing to designate BP's properties as part of a UCA, giving the WDEQ the flexibility to consider a cleanup based on risk to industrial/commercial and recreational users of

the property. The remedy decisions also mandate other institutional controls in order to prevent exposure to subsurface soils (during cleanup) in areas (Soil Management Overlay District) that exceed risk based standards and to prevent water use (Groundwater Use Restriction Area) until the groundwater meets drinking water standards.

Throughout the corrective action process and whenever possible, BP has integrated cleanup systems and remediation requirements with reuse. Examples of this integration is a kayak course in the North Platte River that bolsters the hydraulic containment system on the Refinery Property, construction of wetlands and treatment ponds as water features on an 18 hole golf course, and property development in the Platte River Commons and Salt Creek Business Park.

Remediation activities have been initiated and completed in the North Properties Area, South Properties Area and in the Soda Lake Area. Some of these activities include the installation of the barrier wall and operation of the groundwater removal system along the wall (to ensure hydraulic gradient and prevent releases to the river from the South Properties Area), removal of source materials including subsurface pipe, waste units, and contaminated soil, construction of the CAMU, operation of the groundwater restoration system and completion of the demonstration project (use of surfactants to target localized source areas).

- In the North Properties Area, the only pending remedial implementation activity is the implementation of a biosparge treatment system located in the Eastern Terrace. The implementation of the biosparge system is on hold pending an evaluation of its effectiveness. The evaluation and path forward proposal will be completed in 2014.

- In the South Properties Area, there are several pending remedial activities. The construction of a Passive Bioventing system and two protective barrier zones are still being discussed between BP and the WDEQ. These discussions will result in an implementation of an effective remedial alternative that will ensure residual hydrocarbon goals are met in a timely manner.

- In the Soda Lake Area all remedial activities have been constructed.

ENVIRONMENTAL INDICATORS

Environmental Indicators (EIs) are an EPA measure used to determine if contamination is being mitigated at or from facilities. RCRA authorized States, such as Wyoming, make the determination whether a facility has met the EIs, and that information is reported to EPA. There are two Environmental Indicators: 1) Human Health Exposures Under Control; and 2) Migration of Contaminated Groundwater Under Control. Currently, the State has determined that BP meets EI's for both Human Health Exposures Under Control and that Migration of Contaminated Groundwater Under Control.

PUBLIC INTEREST

All permit and corrective action documents are also available for review by the public at the information repository maintained at the Wyoming Department of Environmental Quality office in Casper, WY.

FOR MORE INFORMATION

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